

The Journal of Borderland Research

VOLUME XLIV, No. 5

September-October 1988

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THE JOURNAL OF BORDERLAND RESEARCH (ISSN 0897-0394) is a publication of Borderland Sciences Research Foundation, Inc., P.O. Box 429, Garberville, California 95440-0429 USA. Phone: (707) 986-7211. The Journal is edited and assembled by Thomas Joseph Brown, Director of BSRF, and is published six issues a year (bi-monthly) with the assistance of the BSRF Associates. The Journal is issued to members of BSRF.

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CONTACT WITH SPACE

by Wilhelm Reich
reviewed by Alison Davidson

"There is no proof. There are no authorities whatever. No president, Academy, Court of Law, Congress or Senate on this earth has the knowledge or power to decide what will be the knowledge of tomorrow. There is no use in trying to prove something that is unknown to somebody who is ignorant of the unknown, or fearful of its threatening power. Only the good old rules of learning will eventually bring about understanding of what has invaded our earthly existence."

The invasion that Reich refers to in his introduction to CONTACT WITH SPACE is the invasion of earth by intelligences from outer space. Very few copies of this remarkable book were made available, and Reich's extraordinary experiences during this turbulent period have been swept under the carpet by 'orthodox' orgonomy.

To speak openly of UFO experiences still invites ridicule or polite smiles of disbelief. Consider then the atmosphere of the mid 1950's when Reich was not only claiming the existence of space visitors, but carefully documenting his battle with these 'invaders', while developing his now well-known cloudbusting techniques.

Reich termed the space craft Ea - 'E' standing for 'Energy', 'a' for alpha or primordial. Ea also represented 'Enigma'...

"Ea is a new event without precedent in our lives," he writes. "Humanity, with the exception of a few philosophers, had no idea of the possibility of visitors from outer space. Earthman had not developed any view, method or scientific tool to cope with the problem. In addition he has developed in his offspring a character structure and a kind of thinking which obstructs the approach to the new fact by way of ridicule, slander and outright threat to the existence of the pioneer of space engineering. Therefore our new approach must start from scratch, as if no science existed at all."

Reich's ability to 'start from scratch' had characterized his revolutionary approach to psychoanalysis early in his career, long before he left the restrictive climate of Europe to pursue his ideas in 'free' America. He is best known for his research into the fundamental life-energy and for his controversial methods of sex therapy. His greatest contribution to real science was his discovery (or re-discovery) of what he called 'orgone', the life energy at the very roots of existence. Blockages in the free flow of this energy in the individual caused 'character armoring' which inhibited the spontaneous expression of joy and pleasure in life. The nature of this cosmic energy, depending on circumstances, functioned either as a 'life giving, life furthering, and reproductive force (OR), or in the absence of such conditions, turns into a killer of Life (DOR)."

During his ergonomic research Reich was able to measure this orgone energy and he successfully treated many patients in the orgone accumulator, a specially layered box wherein the life-energy was concentrated. It was this unorthodox method of treatment which brought down the wrath of the Food and Drug Administration upon Reich, an attack which finally secured his imprisonment, and death, in a federal penitentiary.

"Orgone energy does not exist," the FDA officials said to the Judge. Having declared that Cosmic Energy did not exist, it was obvious that its discoverer must

either be a "quack" or a "lunatic". That, after all, is the rationale of orthodox, mechanistic science chained to its conceptions of a dead universe.

For Reich, the Universe was very much alive and his approach to scientific research was functional, taking into account the subjective perceptions and emotions of the researcher. After all, he writes, "Classical knowledge may all be wrong, such with the perfect Copernican circles, the ellipses of Kepler, the empty space of Einstein, the airgerms of Pasteurian bacteriologists, the atomic nature of the Universe, etc. To see new things from scratch, to expect the impossible to be true, belongs to the emotional equipment of the true pioneering scientist."

"We shall no longer hang on to the tails of public opinion or to a non-existent authority on matters utterly unknown and strange. We shall gradually become experts ourselves in the mastery of the knowledge of the Future."

THE FIRST CONTACT

"From the historic Oranur Experiment of 1951, Reich knew that nuclear radioactivity had a deleterious effect upon the living sea of energy in which we all live. From the observations made of the reaction of a milligram of radium put inside an Orgone Energy Accumulator, Reich knew that there was an antagonistic relationship between the energy of life (Ether, Prana, etc...) and the manmade nuclear energy so recently unleashed upon the planet. The effect of the nuclear 'irritant' seemed all out of proportion to the physical amount of radioactive material. The distance of this irritating and wildly exciting Orgone anti-Nuclear effect seemed to reach much farther than the actual radioactivity of the nuclear material would indicate. Perhaps, Reich reasoned, the Orgone Energy was a continuum; and this anti-nuclear reaction of the life energy (Oranur) extended and perpetuated itself in a chain reaction fashion far beyond the original limits of the nuclear radiation." (1)

The development of the Cloudbuster was a response to the aftermath of the Oranur Experiment. Around Reich's Oranur laboratory near Rangeley, Maine, the atmosphere became polluted with DOR (Deadly Orgone Radiation). The black and bleak DOR clouds were remarkably similar to what would later be called air pollution or smog. These clouds were present even in the midst of sunshine, and where they gathered the atmosphere felt 'suffocating', the sky seemed to lose its sparkle and animals and humans felt lethargy and other symptoms of malaise.

Not only were the DOR clouds a noxious presence, but a black powdery substance poured down onto the area, a substance that Reich came to directly associate with the presence of Ea in the skies above Rangeley. It was here that UFOs began to appear, big yellow and reddish pulsating 'stars' which were easily discernible from the planets and bluish colored fixed stars.

Previous to this Reich had no experience with UFOs and had never studied the subject. Now he was faced with a direct confrontation. Some nights there would be 3 or 4 Ea hanging in the sky above Ororon. They would make the atmosphere black, but by mobilizing the cloudbuster Reich was able to clear the air and make the sky blue again. It was under these peculiar conditions that the 'Spacegun' came into existence, and the war with Ea began.

"I made actual contact by way of the cloudbuster with luminous objects in the sky on May 12, 1954...During this hour men on earth saw for the first time in the history of man and his science two "Stars" to the west fade out several times when cosmic energy was drawn from them."

"Easy contact was made on that fateful day with what obviously turned out to be a heretofore unknown type of UFO. I had hesitated for weeks to turn my cloudbuster pipes toward a "star", as if I had known that some of the blinking lights hanging in the sky were not planets or fixed stars but SPACE machines. With the fading out of the two "stars", the cloudbuster had suddenly changed into a SPACEGUN...what had been left of the old world of human knowledge after the discovery of the OR energy 1936-40 tumbled beyond reprieve. Nothing could any longer be considered 'impossible'. I had directed drawpipes, connected with the deep well toward an ordinary star, and the star had faded out four times."

Reich had first hesitated on using the spacegun on the Ea, considering the possibility of them being some kind of American craft, but the situation became so intolerable with the noxious OR influence, that he finally decided to. He found the power of the Oranur Spacegun tremendous due to the sensitivity of the OR energy ocean. The energy equilibrium of Ea could be disturbed or even put out of order by withdrawing energy from it directly. The affected Ea seemed at first to struggle, pulsating erratically, then shrink and even fade out completely. But the space visitors seemed to be retaliating by increasing the DOR pollution in the vicinity.

"There was no doubt left as to the purposefulness of the activities of Ea: Energy was being drawn from the planet, with the consequences known now, 1956, far and wide as 'DOR-emergency'; decay of vegetation, the crumbling of granite rock, a feverish atmosphere. OR energy laws, mostly unknown to us earthmen, were used technically in the Ea operations."

A detailed report on the Ea problem was forwarded to the American Air Force who appeared to be 'burningly interested' in the subject, but not particularly surprised.

To further test the correlations between Ea and the desert forming DOR, Reich and the cloudbuster crew made their preparations to go to the fully developed desert, and the OROP Desert Expedition was underway.

SURVEY ON Ea

A simple chart Reich made to differentiate between stars and UFOs hovering high in the sky:

"STAR

- 1) Color: Steel blue; flimmering on clear days; not flimmering before onset of rain.
- 2) Size: Smaller than Jupiter.
- 3) Location: In known spot, nightly visible according to known astronomical schedule.
- 4) Movement: Lawful, predictable.

5) Known flying objects: Airplanes move at known speeds; straight or curved; balloons drift with the wind steadily, never against the wind.

UFO

Color: Yellow to red or white, flashing, pulsating. Changing color from yellow to red or green or vice versa.

Size: Mostly larger than Jupiter.

Location: Irregular upon systematic nightly observation. Sometimes appearing suddenly in middle of sky, vanishing suddenly.

Movement: At times regular in accordance with either fixed stars or planets on ecliptic. But also deviating grossly in speed and direction.

Unknown flying objects: May appear like a star on Eastern horizon, then move slowly along horizon to south and sink below horizon in west. UFO of the silvery type change speed abruptly, go against the wind, wobble like spinning tops, disappear suddenly, affect electro-magnetic instruments, cause clouds to disperse. "

Certain facts about the appearance of the UFOs such as their noiselessness, their shimmering lights, sometimes bluish in appearance, rotating discs underlying their motion, fell into place with some of the facts Reich knew well from cosmic OR functioning:

1. The 'CORE MEN' (CORE = COSMIC ORGONE ENGINEERS), as he came to call them, apparently were thoroughly conversant with the laws of functioning in the cosmic OR energy ocean.
2. They used cosmic OR energy in propelling their machines.
3. Their 'blue lights' were in agreement with the blue color characteristic of all visible OR functions, sky, protoplasm, Aurora, sunspots, the color of OR illumination in vacor tubes, etc.
4. The CORE MEN were obviously riding their space ships on the main OR energy streams in the Universe.
5. Just as space is not empty, light does not 'come down to us from the stars and the sun'. It is an effect of illumination in the OR energy envelope of the planets. It is a local phenomenon. Therefore, there is theoretically no limit to speed in cosmic space, and the Ea were able to achieve tremendous speeds.

DEADLY ORGONE RADIATION

Driving across country to Arizona where the expedition would make its base, Reich closely observed the atmospheric conditions. DOR tended to concentrate over cities and became more pronounced as they entered the desert regions. Here it was observed to sink down into the valleys and hover low over the landscape like a ceiling. The tops of distant mountain ridges were seen to project clearly above the DOR shell, like islands above the ocean, and on these peaks the primal vegetation was still alive; while the lower vegetation, covered by the low-lying DOR blanket, died off, leaving only desert in the valleys - especially in the areas near atomic testing sites.

Reich described the mountain ranges as being "eaten out", gnawed at by DOR as if a monster were feeding on the rock itself. The DOR functions were characterized by "a silent, invisible and inaudible gnawing away and insidious consumption of the life force of a host or organism."

"The process of disintegration of trees and whole forests is due to progressive DOR prevalence in the atmosphere. A slight DOR prevalence causes dryness, dryness in turn increases DOR. Thus, in a vicious circle, the water-hunger grows together with diminishing precipitation. The process is slow and not easily discernible. Not much is known about its secret attrition of life."

"It has great significance for the mastery of our future, that DOR surplus causes deserts in the landscape as it does in the organism. Desert souls will enhance desert development; and desert development will increase DOR or staleness in human emotions."

DOR is hungry for nourishment, for water, for oxygen. As the DOR increases it vampirizes its host, in this case the abundant life energy indigenous to the planet.

Reich observes that "the pestilential character shows the same type of behavior. He saps juicy, emotionally rich people, deprives them of their strength, akin to the behavior of a tapeworm, within the host victim. The pestilential character thrives on the energy loss in the victim, but in the end he perishes with the host. From here to sociological conclusions regarding the secret dynamics of political dictatorship is only a logical step: from here, too, a bridge can be built toward

understanding the connection between desert development on our planet and visitors from outer space. These visitors are using fresh cosmic energy for their locomotion and pour the slag, DOR, into our atmosphere. Whether this is being done on purpose or by accident does not matter as far as the effects upon life are concerned."

Reich foresaw the complete destruction of life upon mother earth looming on the horizon, unless DOR energy could be reverted again into OR or Life Energy.

OROP DESERT Ea (1954-55)

"Life holds only a narrow wedge as its own domain in the infinite vastness of cosmic energy."

The desert around Tucson Arizona was chosen for Operation OROP, one of the hottest and oldest deserts (25,000 years) of the U.S. There was no primary vegetation growing; there had been no rain for five years. By October, 1954, the base was operating.

It was not the primary objective of the expedition to "make rain over rainless desert". Reich had no ambition to impress anyone with rain making. Rather he wanted to find the borderline where their artificial efforts at a new atmospheric technology could end "and be replaced by the self-regulatory, self-sustaining laws that governed the behavior of cloud formation, rain cycles, cosmic energy metabolism in the atmosphere, etc, as they do in the living organism."

He had observed that the living organism apparently metabolizes freshly taken in OR energy into DOR, which is expelled in the form of CO₂, urine, feces and sweat. In the healthy organism the energy equilibrium between the charge and the discharge was easily maintained, however, during sickness more OR seemed to change into DOR. Thus, Reich concluded, a prevalence of DOR would be a basic feature of all disease.

Subjectively Reich and his co-workers experienced the DOR atmosphere in the desert as oppressive and irritating, with the blinding heat seeming to draw the juice and life energies out of their bodies.

"Thus, having seen and felt the desert, Expedition OROP proceeded to begin cloudbuster operations, in order to find out whether such a climate could be changed."

"With cloudbusting operations, much DOR was removed and fresh Orgone Energy was brought in from the Southwest (along the Galactic Orgone Stream). The immediate result was a freshening of the atmosphere and environment: gone was the parching dryness and gone was the blinding whiteness of the sky. Rainmaking was not the goal; in fact, noticeable results occurred prior to any rain falling on the dry, sandy desert floor. By November, the barren desert north of Tucson began to turn green with a fine growth of new grass! In December, the greening of the desert had spread to cover an area 40 to 80 miles from Tucson with new grass up to one foot high! This happened without any rain falling, due solely to the fresh atmospheric Life Energy and attendant moisture from the Pacific Ocean, 250-400 miles to the Southwest."(1)

The arrival of denatured Radium (ORUR), from the Oranur experiment at Rangeley dramatically increased the effectiveness of the cloudbusting operations. "While the clearing of the atmosphere had previously been done by drawing off the DOR clouds into a lake, now, within a few seconds, using ORUR material, the sky cleared and became blue...The change in the atmosphere was immediately felt by all observers.

Even dirty steel-gray, DOR-affected rain clouds seemed to fill up and become white in a brilliant, formerly dull, stale atmosphere."

However, Ea were also observing the operations. Whenever the familiar pulsating craft were seen in the sky, the rain clouds disappeared and severe DOR infested the atmosphere, making conditions extremely unpleasant for the crew. If the Spacegun was not used, the atmosphere became unbearable. One operator at a Spacegun was paralyzed by DOR while drawing from an Ea. Reich wrote: "There was no escape from the fact that we were at war with a power unknown to man on earth."

But the ORUR was found to be extremely effective in combatting the Ea menace. "One could now reach far into space with ORUR: the range was ~~limitless~~ theoretically, since the OR energy ocean is endless and most sensitive to stimuli as demonstrated by the processes of dawn, dusk, and our actual operations over vast stretches of space."

Another DOR-creating problem was atomic testing within the desert region. Reich was later to consider the possibility of immunizing the atmosphere against atomic explosions, much as living systems are immunized against infection. By creating a highly 'orurized' atmosphere, he reasoned, the DOR energy from atomic blasts or from Ea could be siphoned off. It was noticed that during the ORUR operations, there were 'coincidentally' many publicly announced postponements of atomic tests.

It became apparent to Reich that although there was moisture in the atmosphere, the lack of actual rainfall around Tucson was due to a DOR barrier somewhere west of the experimental site in Arizona, preventing the clouds and moisture flowing in from the Pacific. The barrier was found to exist on the Sierra mountain divide, where a concentration of DOR was breaking up and dissolving the rain clouds coming in from the west.

By March 1955, continuous DOR removal operations were set up just to the west of the divide. Within two weeks the barrier was breaking up with a black precipitate form of DOR ("Melanor") falling to the ground and turning the white sand dark. By the end of March rain began to occur in the desert. The breaking of the DOR barrier had accomplished the full breakthrough of fresh OR energy into the desert basin.

The expedition was successful. The atmosphere had undergone a radical change, breaking a five year drought and turning completely barren desert land into green pasture again after thousands of years.

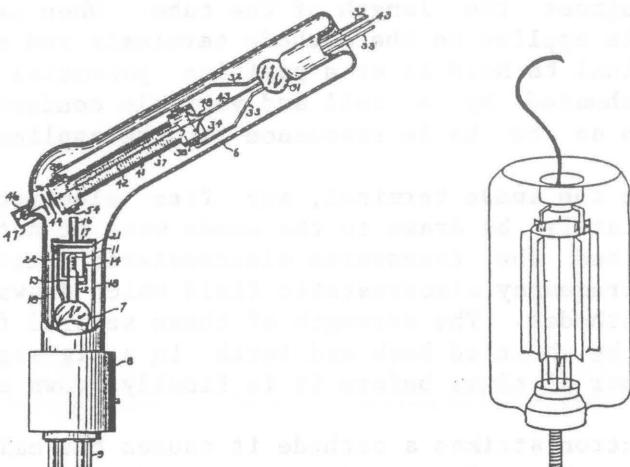
It proved conclusively to Reich that desert development was clearly and doubtlessly reversible, that through a new kind of orgone technology, humanity could convert life-destroying energy back into life-sustaining energy.

Winding up his affairs, Reich left the desert in April 1955. It was to be his last major operation. Within two years he was to die in prison, destroyed by a system that could not tolerate the free expression of live-giving energy. But the Enigma remains...

REFERENCES:

- (1) 'The New Age' by Klark Kent, The Journal of Borderland Research, May-June 1987.
- CONTACT WITH SPACE by Wilhelm Reich, Core Pilot Press, New York, N.Y. 1957.
- THE WILHELM REICH MUSEUM, PO Box 687, Rangeley ME 04970.
- FURY ON EARTH by Myron Sharaf, St. Martin's Press, New York. 1983.

THE FARNSWORTH MULTIPACTOR TUBE
Farnsworth's Cold-Cathode Electron Multiplier Tube
Uses Neither Grid Nor Filament
By Arthur H. Halloran
From RADIO October, 1934



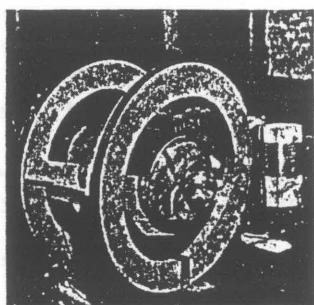
Ralph M. Heintz (center) explains the operation of the Farnsworth Cold Cathode Tube to Bernard H. Linden (left), U. S. Radio Inspector, and Donald Lippincott (right), director of Television Laboratories, Inc.



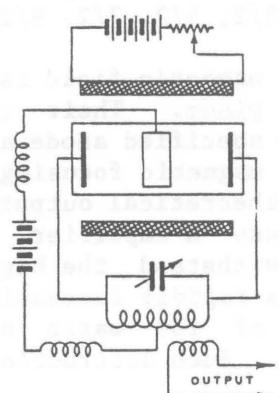
Think of a vacuum tube without filament or grid, thus requiring neither an A nor a C battery, which generates high-frequency oscillations! This is what Philo Taylor Farnsworth II, the television genius, accomplishes with the cold-cathode tube which he originally developed as a current-amplifier for use with his cathode-ray pickup tube. It is also an exceedingly efficient detector and modulator.

Its first public use as an oscillator was in a radio circuit whereby communication was maintained between San Francisco and Honolulu and between San Francisco and New York on September 13, 1934, over the Globe Wireless 35-meter channel. In this test, with 30 milliamperes at 1100 volts on the anode, the tube drove a pair of 150-watt tubes in the final amplifier of a transmitter at the Heintz & Kaufmann factory in South San Francisco. The signals were received at both Honolulu and New York, and were reported as R9 by a ship 500 miles west of Honolulu. Wilkens of Dunedin, New Zealand, also heard the transmissions.

Previous laboratory tests proved that the tube is capable of generating oscillations of any desired frequency throughout the range from 200 kilocycles to 60 megacycles, these limits being set only by the dimensions of the available tuned circuits. An undistorted output of 25 watts was obtained from an input of 25 watts.



The Electron Multiplier as a high-frequency self-excited oscillator.



Oscillator circuit for cold cathode tube.

AS AN AMPLIFIER

The performance of this new type of tube depends upon the emission of secondary electrons from two cathodes which are bombarded with high-velocity primary electrons. The cathodes are coated with caesium silver oxide to enhance secondary emission. They, together with a central ring anode, are assembled in an evacuated glass tube. The tube is placed within a solenoid which is supplied with direct current so as to maintain an intense magnetic field throughout the length of the tube. When used as an amplifier, a high frequency voltage is applied to the cathode terminals and a D.C. voltage is applied to the anode terminal to hold it at a positive potential with respect to the cathodes, which are shunted by a coil and variable condenser in parallel. The shunt circuit is tuned so as to be in resonance for the applied high frequency voltage.

When the D.C. voltage is applied to the anode terminal, any free electrons in the inter-electrode space would immediately be drawn to the anode were it not that the longitudinal magnetic field neutralized the transverse electrostatic field from the anode and were it not for the high-frequency electrostatic field which draws them to the alternately positively charged cathodes. The strength of these several fields can be adjusted to allow an electron to be shuttled back and forth in a zig-zag path between the cathodes any desired number of times before it is finally drawn out of circulation at the anode.

Each time that a high velocity electron strikes a cathode it causes the emission of from 2 to 8 secondary electrons, the number of secondaries depending upon the velocity of the impacting electron, and thus upon the amplitude of the voltage applied to the cathodes. Each emitted secondary likewise causes the emission of more secondaries, so that the process is rapidly cumulative and gives rise to a tremendous amplification of current.

In the foregoing simplified account of the tubes operation as an amplifier, one important factor has been omitted. The anode attraction, which causes an electron to leave the vicinity of a cathode and which accelerates its velocity as it approaches the plane of the anode, also decelerates its velocity as it leaves the anode plane and approaches the second cathode, which is now positively charged so as to attract it. Its resultant velocity may therefore not be sufficient to cause emission from the second cathode. To insure emission, additional energy must be imparted to it, this energy being obtained from that stored in the resonant circuit, as indicated in the accompanying circuit diagram.

The high-frequency supply is of the order of 50 megacycles and is loosely coupled to the tuned circuit so as to apply from 25 to 90 volts across the cathode terminals. The positive potential on the anode may be 100 volts or more, depending upon the desired current output.

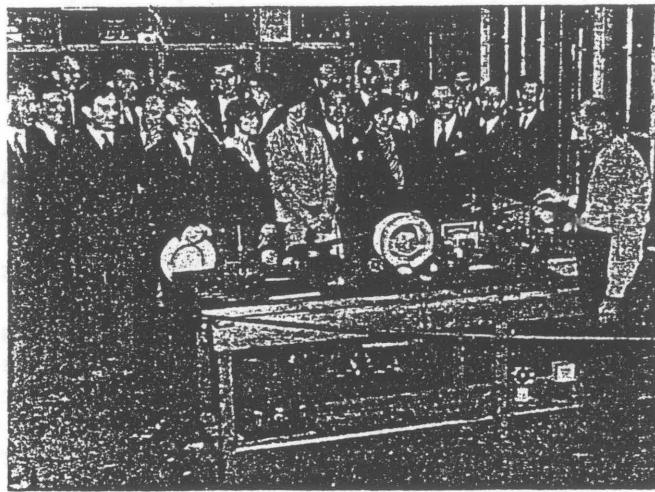
The tube has a discontinuous voltage-current output characteristic with a series of successively higher current peaks as the voltage is increased. Maximum current output is obtained when the anode voltage is just sufficient to allow an electron to travel from one cathode to the other during 1/2 cycle of the high frequency excitation. Other successively lower peaks occur at anode voltages corresponding to transit times of 3/2, 5/2, 7/2, 9/2 cycles, the last being the least which has yet been measured.

The external magnetic field is unnecessary when the cathodes are properly curved instead of being plane. Their curvature can be calculated to focus the electrons automatically for specified anode and cathode voltages. This eliminates the need of a D.C. supply for magnetic focusing.

The tube's theoretical output is twice that of an equivalent hot-cathode tube operated as a Class A amplifier. Its practical output is limited by the ability of the cathodes to withstand the high temperature to which they are subjected by bombardment from a rapidly increasing number of electrons. One test of a small tube showed an output of 100 watts of undistorted energy before the cathodes were destroyed by heat. Such destruction is prevented by means of resistors in the

cathode leads. A small tube can be safely operated so as to deliver 45 milliamperes with 200 volts on the anode. It is to be noted that the tube operates as a current amplifier and that the amount of voltage amplification is dependent upon the resistance in the output circuit.

A new chapter in radio history is written. The illustration shows Mr. Ralph M. Heintz adjusting a 150-watt R.F. Amplifier which is being driven by the sensation-ally new Farnsworth Electron Multiplier Tube. This new tube uses neither filament nor grid. "Among those present" in the photo are Dr. Leonard Fuller, Dr. F. E. Terman, Arthur H. Halloran, Herbert E. Metcalf, Donald Lippincott, George Everson, and other radio engineers and scientists.



The theory of the tube's operation as a detector or modulator should be evident from the non-linear voltage-current characteristic and requires no elaboration here. It is especially sensitive in the detection of ultra-high frequencies. [Editor's Note: P.T. Farnsworth III told Eric Dollard that the multipactor tube and the Tesla coil were a marriage made in heaven! TB]

It is a well known fact that any amplifier circuit generates oscillations when arranged to furnish an input voltage of proper magnitude and phase. Consideration of the manner in which Farnsworth's tube functions as an amplifier shows that it conforms to this requirement when connected to a resonant circuit which is tuned to a frequency whose half-period is equal to an electron's time of transit, as determined by the frequency of the oscillations applied to the cathodes.

But the great value of the Farnsworth tube resides in the fact that it is self-exciting, i.e., that it requires no external high frequency voltage when used as an oscillator. Aside from the energy which is required for the magnetic focusing field and which may not be needed eventually, the only external source of energy is that which maintains a positive potential on the anode. It apparently represents a new discovery in vacuum tube phenomena. Among engineers there is a difference of opinion as to its cause.

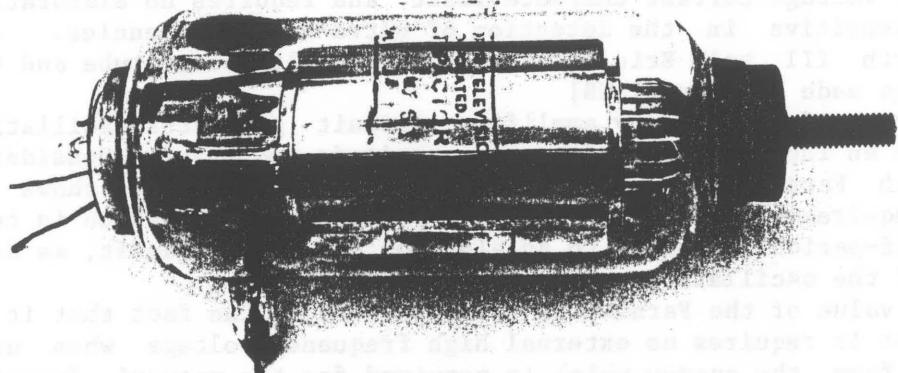
One plausible explanation is based on the assumption that there is no appreciable space charge effect in the tube when oscillations start. There are always some free electrons present in the inter-electrode space, if only those due to photoelectric emission from the cathodes. These are attracted by the anode when it becomes strongly positive but are prevented from immediately going to it by the longitudinal magnetic field. Their acceleration as they approach the plane of the anode causes a current to flow, through half the inductance coil in the tuned circuit, to one cathode. This provides an out-of-phase voltage drop which accelerates the electrons toward the other cathode with sufficient velocity to cause secondary emission therefrom. The emitted electrons then establish a current flow through the other half of the mid-tapped coil and cause a voltage drop in opposite phase so as to accelerate the electrons toward the first cathode which is thus caused to emit more secondaries. Repetition of this process quickly builds the current up to a point where it can be delivered to the output circuit without stopping the internal oscillations. The oscillating frequency is that to which the resonant circuit is tuned. This explanation has not been confirmed by physicists, but is

presented only as a means for visualizing possible actions in the tube. When the engineers disagree, the physicist must experiment.

Much work has yet to be done before standardized tubes will be available for experimental use. Television Laboratories Ltd. has licensed two factories for commercial production. But it will probably be a matter of some months before tubes are available for amateur use.

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Mrs. Elma "Pem" Farnsworth has recently lent Eric Dollard and Borderland a Multipactor Tube for testing in our lab. The Multipactor holds promise in the "free energy" field as a truly workable electronic device that may produce over 100% efficiency. The test as noted in the above article claims that "an undistorted output of 25 watts was obtained from an input of 25 watts." This does not take into account radiated heat and possible residual losses. The Multipactor that Borderland is testing is a perfected model of the unit referred to in this article. It appears as though it actually was used in radio frequency broadcast equipment. Preliminary tests show the tube to be good and further tests are being planned. More information will be released through this Journal as we progress on this project.



For those interested in obtaining more information on the Multipactor Tube the related U.S. Patent numbers for P.T. Farnsworth II are: #1,969,399 - Electron Multiplier, Aug. 7, 1934; #2,071,515 - Electron Multiplying Device, Feb. 23, 1937; #2,071,517 - Multipactor Phase Control, Feb. 23, 1937; #2,135,615 - Multipactor, Nov. 8, 1938; #2,140,285 - Multiplier Coupling System, Dec. 13, 1938; #2,140,832 - Means and Method of Controlling Electron Multipliers, Dec. 20, 1938; #2,141,837 - Multistage Multipactor, Dec. 27, 1938; #2,141,838 - Split Cathode Multiplier Tube, Dec. 27, 1938; #2,143,262 - Means for Electron Multiplication, Jan. 10, 1939; #2,161,620 - Two Stage Electron Multiplier, June 6, 1939; #2,172,152 - Radio Frequency Multipactor Amplifier, Sept. 5, 1939; #2,174,487 - Self-Energized Alternating Current Multiplier, Sept. 26, 1939; #2,179,996 - Electron Multiplier, Nov. 14, 1939; #2,203,048 - Shielded Anode Electron Multiplier, June 4, 1940; #2,204,479 - Means and Method for Producing Electron Multiplication, June 11, 1940; #2,217,860 - Split Cathode Multiplier, Oct. 15, 1940; #2,260,613 - Electron Multiplier, Oct. 28, 1941; #2,274,194 - Apparatus For and Method of Electron Discharge Control, Feb. 24, 1942; #2,286,076 - Electron Control Device, June 9, 1942; #2,311,981 - Electron Control Device, Feb. 23, 1943.

The work of Philo Farnsworth II is as important to energy researchers as that of Nikola Tesla. All of us at Borderland wish to thank the Farnsworth family for allowing Eric Dollard access to the technology. There is much yet to be learned from the work of P.T. Farnsworth II. Among his outstanding achievements he developed television and also a way to produce nuclear fusion electronically (see U.S. Patent #3,386,883 - June 4, 1968).

Pem Farnsworth has joined with son Kent in the Pemberley Kent Publishers, Inc. The current project is Pem's biography of her husband Philo II (whom she calls Phil) which is also an autobiography of her life with him. From the chapter outlines that I have seen so far this promises to be an excellent book which is not just the story of the invention of television but a fascinating view into the life of an original thinker and inventor and the struggles in his life to manifest his ideas against great odds.

Advanced sales of the Collectors Classic Edition (a limited, numbered edition of 500) of the as yet untitled biography, along with the sale of stock in Pemberly Kent Publishers, Inc. are now taking place and will be the means by which the regular edition of this book will be printed. From the Pemberly Kent press release:

"As the publicity we have planned and anticipate will surround the placement of the statue of Philo T. Farnsworth II in the Capitol in Washington, D.C. begins to grow, we feel the Collectors Edition is highly appropriate and will sell out completely in advance of the publication date (3-10-89).

"The Collector's Classic Edition will be impressive. There will be a quality cover with embossed gold lettering. Each edition will be accompanied by one of the last 500 Philo Taylor Farnsworth II commemorative stamp covers cancelled on the First Day of Issue in the office of the Postmaster General in Washington, D.C. The edition will include a fine portrait of Philo and be personalized and autographed by the author, naturally. Pem is working very hard to bring a very special story into this world, she has a powerful and moving story here.

"Friends and relative were, of course, given first opportunity to purchase this special edition and they have responded dramatically. The promotion of the collector's Edition in Idaho on the 13th & 14th of May, 1988 will be the last limited offering. The public offering to collectors, speculators, researchers, etc. will commence immediately after the festivities in Idaho.

"Despite the unexpected demand for this edition, we intend to stand fast in our promise to limit this edition to 500 numbered reproductions, in deference to the serious collector or speculator. Who knows what this edition will be worth after the Philo's statue is unveiled in Washington, D.C.?

"As each issue is paid for, a certificate of authenticity will be issued stating to whom it will be personalized and the specific edition number he or she will receive. If you are buying one or more for speculative purposes, state this when you order and the personalization will be omitted.

"The collectors edition currently has a \$100 price tag. There is a payment plan available (four monthly payments of \$25) which many have found very helpful. There is a likelihood of the price doubling after October 15, so your quick response on this is appreciated."

For the latest edition of the Pemberly Kent Newsletter send \$2 to cover printing and postage. Anyone interested in more information regarding the Collector's Classic Edition should, with all due haste and speed, contact:

Kent M. Farnsworth, President, PEMBERLY KENT PUBLISHERS
2121 Garfield Avenue, Salt Lake City, UT 84108
Phone: (801) 583-9921

DEMONSTRATING A ZERO-POINT ENERGY COHERENCE
Moray B. King

A zero-point energy coherence can be demonstrated by utilizing sharply pulsed, bucking magnetic fields produced within a caduceus coil whose core is a plasma tube resonating in the ion-acoustic mode. A gravitational anomaly is maximized when the pulsed excitation is in phase with the ion-acoustic oscillations.

The following experiment involving a caduceus coil wound around a plasma tube will demonstrate a zero-point energy coherence. A caduceus coil consists of two (or more) identical coils of opposite helicity wound on a long hollow cylindrical tube. The windings cross each other on opposite sides of the cylinder. The exact mirror image symmetry of the windings is most important because the purpose of the caduceus coil is to produce an abruptly bucking electromagnetic field. To accomplish this, transient voltage pulses that propagate up both windings of the coil must remain perfectly in phase. Maximal results are achieved with a sharp pulse rise time as long as the pulse edges remain aligned as they propagate up both windings.

The core of the caduceus coil contains a long cylindrical, gas-discharge plasma tube excited such that it resonates at the plasma ion-acoustic mode. The ion-acoustic frequency, which is a function of the plasma density, can be experimentally determined by varying the pulse repetition frequency of the power source (1 to 500 KC for typical tubes). The ion-acoustic resonance is an energetic event exhibiting high frequency spiking, run away electrons, etc. Ideally, the rate of pulsed excitation on the caduceus coil should match the ion-acoustic resonance. One way to achieve a matched phase excitation is to couple the plasma tube electrodes to the caduceus coil leads. In this manner the high frequency spiking from the plasma ion-acoustic resonance becomes the pulsed excitation for the coil itself.

The abruptly bucking magnetic fields on the nuclei of the plasma yield a pulsed change in the stress-energy tensor around the highly curved space-time metric near the ions' nuclei. This creates a microscopic coherence in the zero-point energy flux through the nuclei. The ion-acoustic oscillations then couple this energy coherence into a macroscopic vacuum polarization yielding a macroscopic alteration of the space-time metric. This will manifest a change in weight of the apparatus, or a change in frequency of a mechanical oscillator placed above the coil. A sensitive measurement can be made by mounting the apparatus on a suspended platform which is the base of a large pendulum. The period of the swinging pendulum will change as a result of a change in the local space-time metric.

It is hoped that many investigators share the results of their experiments, for it is the repetition of an experiment that will usher in a new technology.

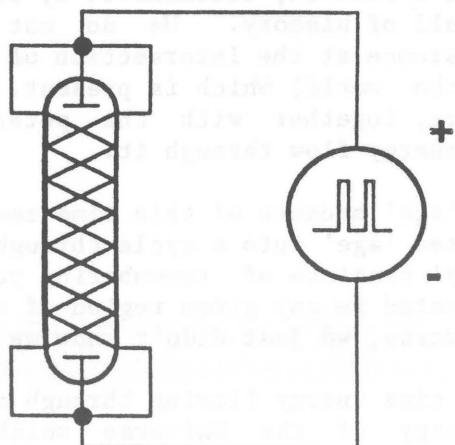
References

1. M.B. King, "Cohering the Zero-Point Energy." Proceedings of the 1986 Tesla Symposium, International Tesla Society (330-A West Uintah Street, Suite 215, Colorado Springs, CO 80905-1095), Chapter 4, pp. 13-32.

"By merging theories of the zero-point energy with the theories of system self-organization, it becomes theoretically possible to cohere the zero-point energy as a source. The key component for interacting with the zero-point energy is nuclei of ions in a plasma or electrolyte. A hyperspatial flux model of the zero-point energy is introduced, and it is shown to be affected by abruptly pulsed, opposing electromagnetic fields. This leads to the concept of a "scalar wave" which is modeled as a hyperspatial structure consisting of vortex rings of electric flux. The projection of this structure through three dimensional space yields scalar and longitudinal electromagnetic components. No energy propagates through these components, but energy may propagate through the parallel hyperspace. Experiments are suggested to test the proposed model."

2. M.B. King, "Macroscopic Vacuum Polarization," Proceedings of the 1984 Tesla Centennial Symposium, International Tesla Society, Colorado Springs, CO, pp. 99-107.

"Nikola Tesla and T. Henry Moray claimed inventions that absorbed anomalously large amounts of environmental radiant energy. These inventors may have discovered a macroscopic vacuum polarization zero-point energy coherence associated with ion-acoustic oscillations in a plasma."



**Pulsed excitation of a caduceus coil surrounding
a plasma tube in ion-acoustic resonance
exhibits a gravitational anomaly**

HOW THE EQUIVALENCE ENGINE WORKS
Bruce E. DePalma
Simularity Institute
10 June 1977

TIME ENERGY: In the conception of an idea such as a free energy machine the idea appears first as an inspiration or dream emerging as a result of incredible tension. The tension is resolved first as an intuition or dream of a machine (the language of the experimenter) which is then instituted or later explained on the basis of paradigms which form the structure of the 'language', i.e. physics. What we get is always in our genes, we just figure out how to say it. The tracks of man. We make up our own language as we go along.

A good way of figuring out or understanding where the energy comes from is to consider the Universe as a living form with both temporal and spatial extension. We can 'see' the spatial extension all around us but we only sense the time extension in the form of memory or vibrations around an object (the aura).

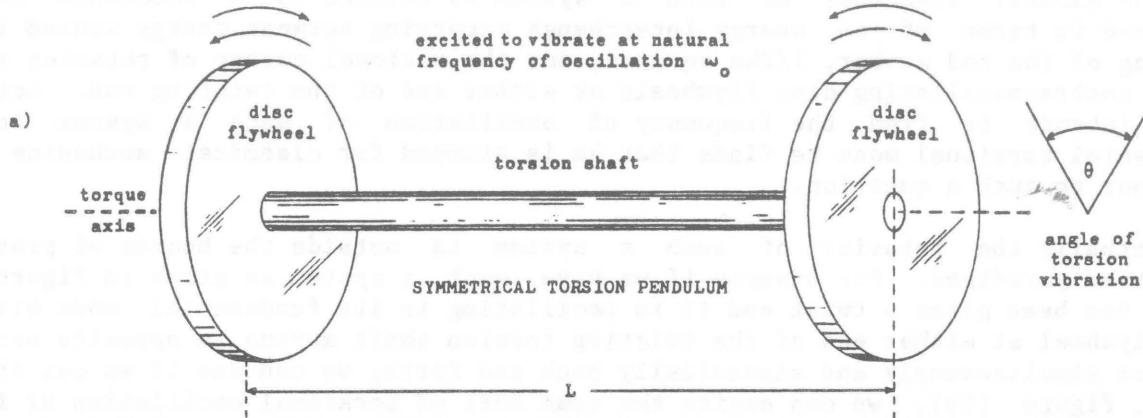
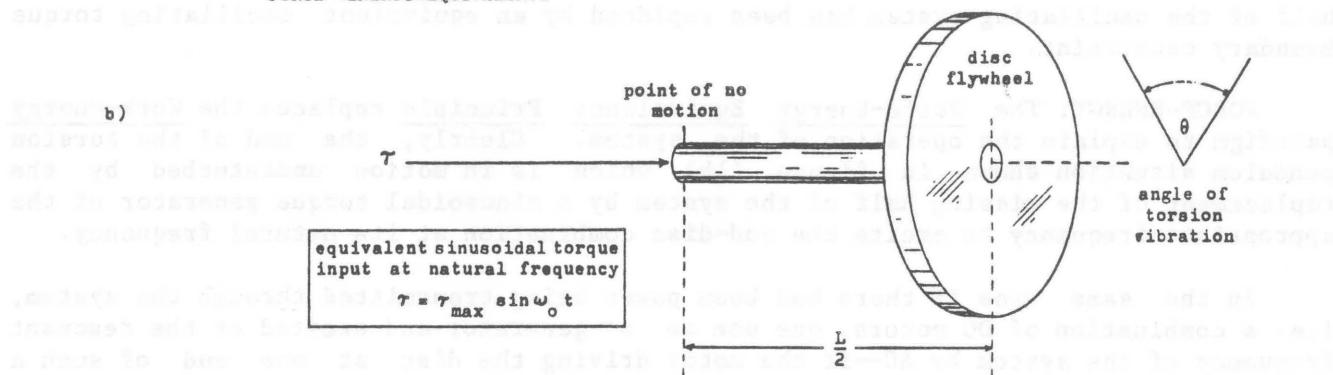
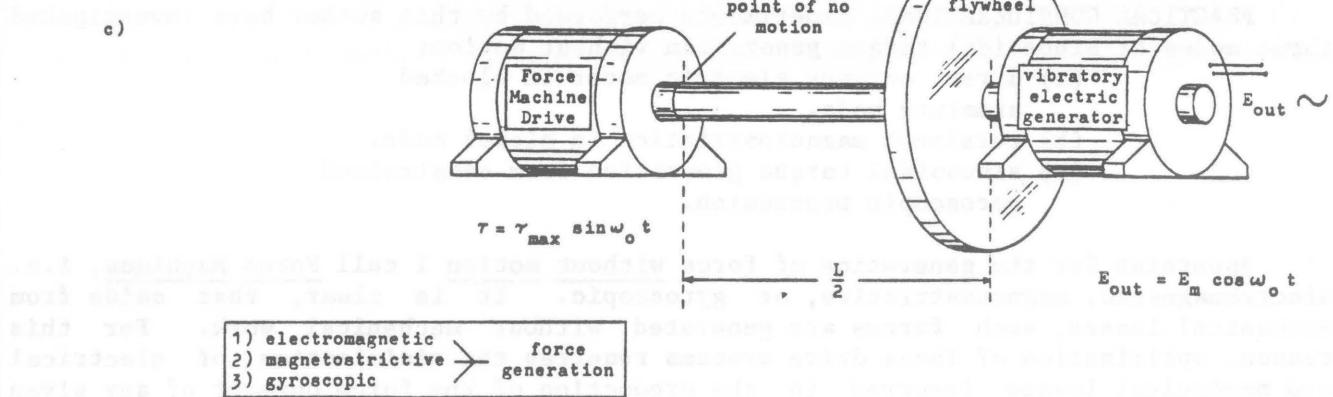
Although the physical body is anchored to the present the mind travels in time and space. The now consists of the point where future time intercepts past existence. This point is where an energy transfer takes place from the time energy of space to the real time of our past behavior or history. History is dead time. It exists in the mind of the rememberer until it dies and disappears. Records can be made, but they eventually disappear too. So the mind of man is finite and consists of all that he remembers or has records of. What I'm getting at is man and his world sits still in the present and the time-energy flowing through him energizes his present. So man and the world of man are like a projection slide through which the time energy plays and projects our existence out on the tapestry of created 'our time'. So man starts out as a pattern, illuminated by the time energy, he plays out his life in the emerging scroll of history. We do not go into the future. The so called future comes into existence at the intersection of the time-energy flow with the matter (man, animals, the world) which is present. So the species has a total existence of what it remembers, together with the potentiality of what is present being energized by the time energy flow through it.

We can say that things 'age' because of this time energy flow. The miracle of life is that it has converted 'age' into a cycle through the mechanism of the seed. In this context, 'immortality' consists of remembering your past, up to the limit of the species itself--as manifested in any given region of space. We are all different parts in the body of the Universe, we just didn't know we were.

This blood plasma, this time energy flowing through all of us and everything, this is the fundamental energy of the Universe which animates all things. If everything which moves, and age is a form of motion, is animated by the same time energy; all lesser forms of energy, i.e. electricity, heat and pressure, are derived from that basic flow. It should be simple for us to tap this energy for the key is time is motion.

THE EQUIVALENCE ENGINE: The equivalence engine consists of a torsion pendulum excited at the nodal point. Power is taken from the end in motion. With reference to figure (1a) we see a system which is a combination of two metal discs separated and connected by an elastic member, a rod joining the discs by their centers affixed

Figure (1)

EVOLUTION OF THE EQUIVALENCE ENGINE**FORCE ENERGY EQUIVALENCE****EQUIVALENCE ENGINE**

drawn: ECD 6-77

perpendicular to the surface of the disc ends. This "bar-bell" is caused to oscillate, is set in its natural mode of torsional oscillation by twisting one of the combination in relation to the other and then releasing the pair to freely oscillate in the manner shown at the natural frequency of the system.

The natural frequency of such a system is related to a resonance usually described in terms of an energy interchange occurring between energy stored in the twisting of the rod member, $1/2ke^2$, and the motional energy of rotation stored in the contra-oscillating disc flywheels at either end of the twisting rod. Actually if one intends to find the frequency of oscillation of such a system in the fundamental torsional mode he finds that he is stumped for classical mechanics gives no answer to such a question.

Actually the behavior of such a system is outside the bounds of presently understood paradigms. For example if we have such a system as given in figure (1a) and it has been given a twist and it is oscillating in its fundamental mode with the disc flywheel at either end of the twisting torsion shaft moving in opposite sense of rotation simultaneously and sinusoidally back and forth; we can see if we cut the rod in two, figure (1b), we can excite the same sort of torsional oscillation of figure (1a) by simply providing a source of sinusoidal torque excitation at the center of the rod which duplicated the alternating torque situation which existed when the rod was whole, (i.e. the two parts were put together). The equivalence engine results when the end of one shaft (and disc) still in motion does not know the missing one half of the oscillating system has been replaced by an equivalent oscillating torque boundary constraint.

FORCE-ENERGY: The Force-Energy Equivalence Principle replaces the Work-Energy paradigm to explain the operation of the system. Clearly, the end of the torsion pendulum situation shown in figure (1b) which is in motion undisturbed by the replacement of the missing half of the system by a sinusoidal torque generator of the appropriate frequency to excite the rod-disc combination at its natural frequency.

In the same wise if there had been power being transmitted through the system, i.e. a combination of DC motors, one use as a generator and excited at the resonant frequency of the system by AC--if the motor driving the disc at one end of such a system were moved to the center and operated in a blocked armature mode so as to produce a sinusoidal torque only, no motion of the shaft,--then we would have a situation where work out-put was extracted; was extracted from the generator end for no mechanical work input (2de) at the driven end. The situation shown at figure (1c) is the resultant equivalence engine.

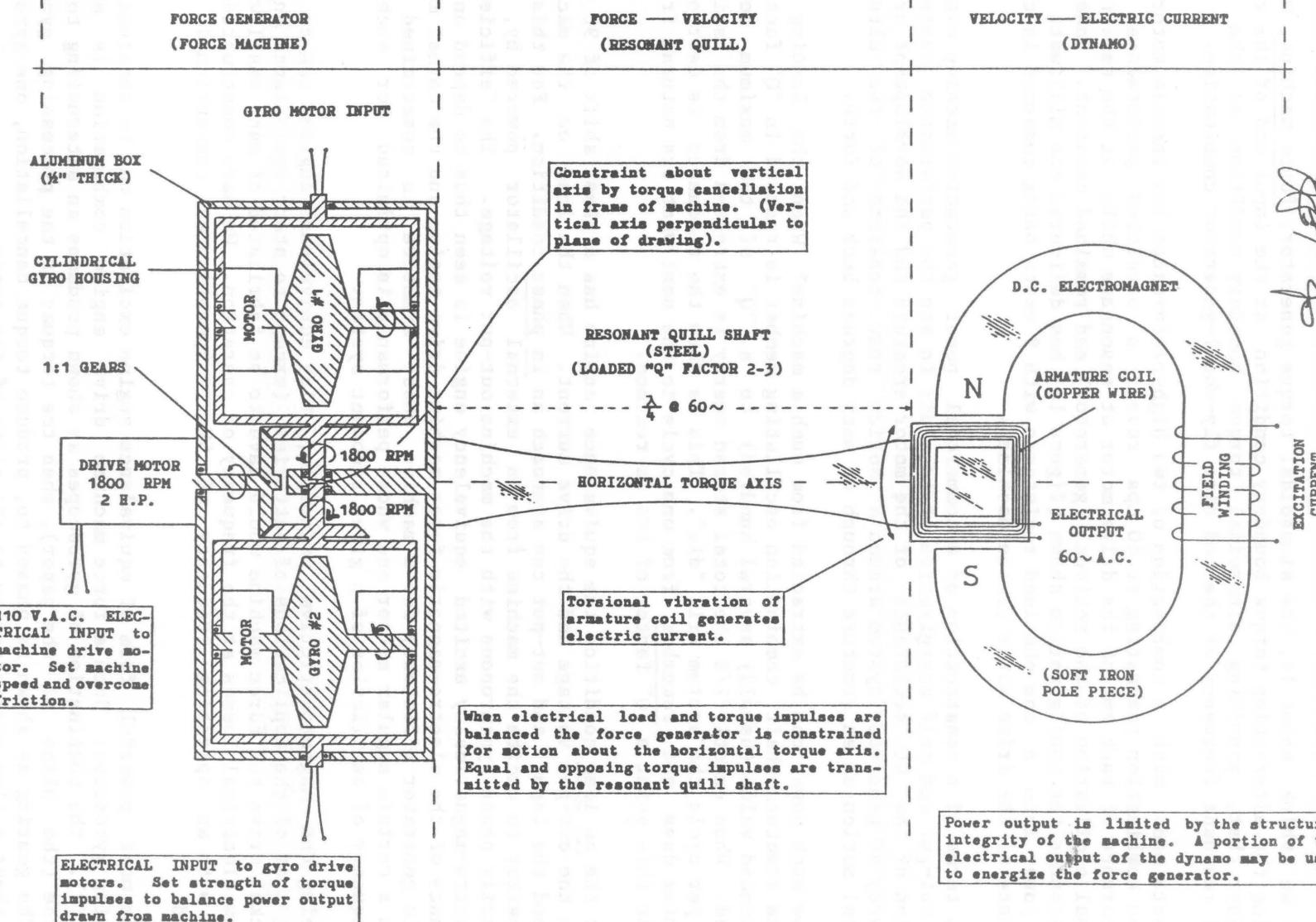
PRACTICAL CONSIDERATIONS: Experiments performed by this author have investigated three modes of sinusoidal torque generation without motion:

- (a) direct current electric motor in blocked armature mode.
- (b) torsional magnetostriiction in nickel mode.
- (c) sinusoidal torque generation from constrained gyroscopic precession.

Apparatus for the generation of force without motion I call Force Machines, i.e. electromagnetic, magnetostriuctive, or gyroscopic. It is clear, that aside from mechanical losses, such forces are generated without mechanical work. For this reason, optimization of these drive systems requires the minimization of electrical and mechanical losses incurred in the production of the force out-put of any given

EQUIVALENCE ENGINE

BRUCE E. DEPALMA
APPLICATION OF THE PRINCIPLE OF THE SPACE DRIVE TO THE GENERATION OF ELECTRICAL POWER



drive engine. In so far as the out-put being extracted from the generator (motional) end of the machine, no work is required.

If we think about it, the sinusoidal torque generator, force machine, which is supplying the alternating torque boundary condition at the input end of the rod,--is doing just that, providing sinusoidal torque boundary condition at the precise natural resonant frequency of the rod disc fly-wheel-generator combination.

Tests made with a combination of two high-performance low inertia motors and a rod disc combination resonating at 60 cps reveal a predicted performance of the disappearance of back emf of the drive motor at resonance while at the same time the torsional oscillation of the motional (generator) end remained constant. Under these circumstances the configuration shown (figure 1c) has delivered one milliwatt of free energy power into a one ohm load resistance with 9 watts being consumed in the (DC) resistance of the drive motor (force machine).

In terms of a construction of a commercial power generation machine capable of useful out-put and self energization it is clear to see the performance rests on the reduction of the DC resistance of the motor armature and the development of a high efficiency AC generator system around a motion that consists of the alternating torsional motion of an armature through so many degrees back and forth.

How much power can be extracted from such a machine? When the loading is such that the armature-shaft combination oscillating member is reduced in "Q" factor from the unloaded value (usually several hundred) to a "Q" of two maximum power is achieved. When exactly 1/2 the total stored energy is extracted from the oscillating system per cycle the system will "die". This is when the resonance is destroyed and the system does not remember from one cycle to the next what its natural frequency was. At this point a "Q" factor of two is reached.

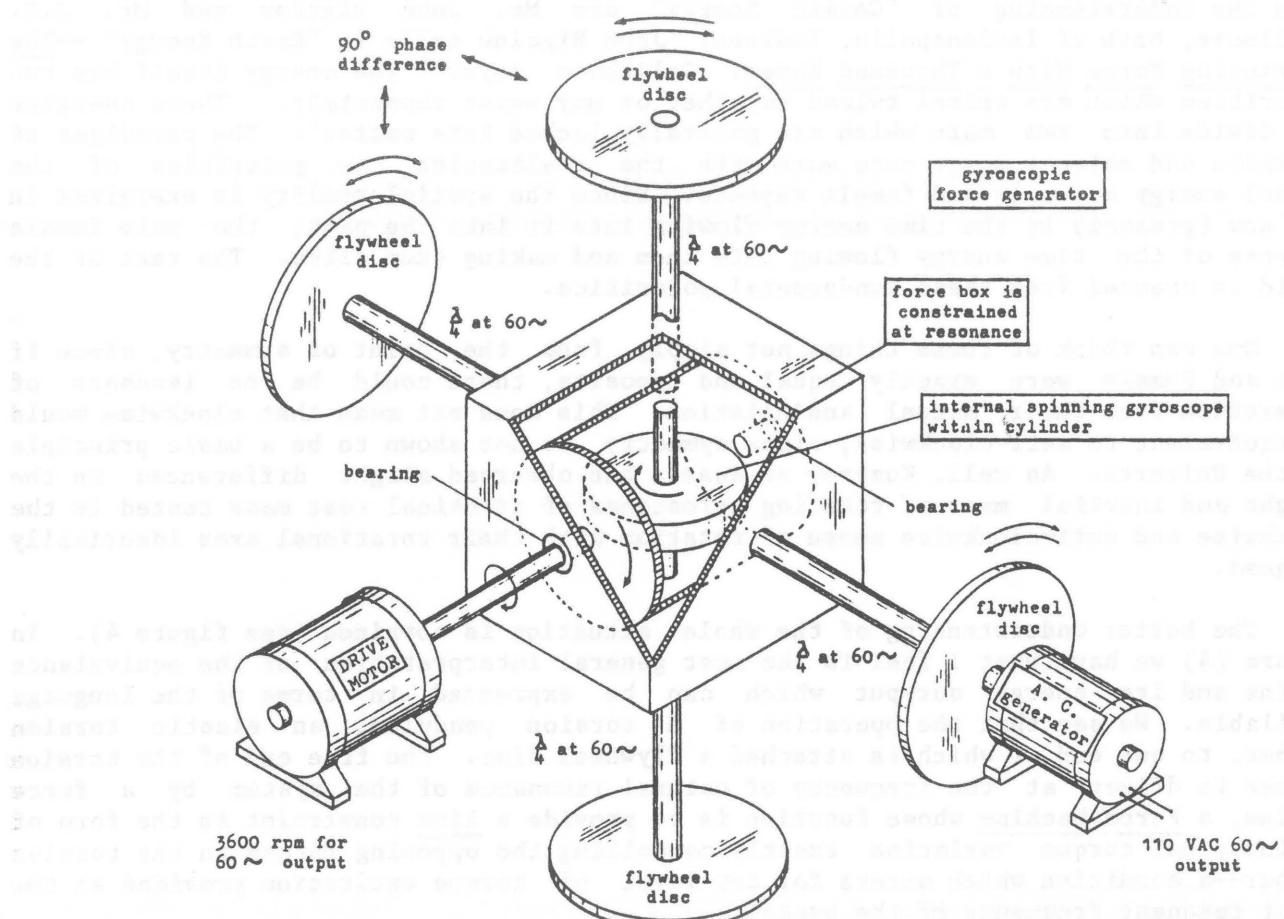
At the no load condition the equivalence engine has a phase shift of 90 degrees between the out-put voltage and the drive current. When the load on the machine is increased the input and out-put can approach an in phase condition. For this reason it is better to excite the machine from an external oscillator powered by, but not necessarily phase synchronous with the machine out-put voltage. The "efficiency" of the electro-magnetically excited equivalency engine is seen thus to depend on the DC resistance of the electro-magnetic force machine drive engine and the normal motional electric generator efficiency for a machine whose armature is constrained to move through a certain angular sector and whose performance is optimized for such a mode and frequency of oscillation of a given resonant system.

Using the magnetostrictive principle, tiny equivalence engines can be used to replace most of the applications of batteries (except to start equivalence engines). The nickel drive rod force machine would have to be fabricated of many small wires to have low electrical losses at the frequency of operation. We have constructed such a machine with an operating frequency of 5Kc. Operation was conventional and as expected.

The most powerful form of equivalence engine excitation can be obtained from a precessing gyroscope. Such a force machine drive engine combination is shown as figure (2). The combination of gyroscopes as shown produces an alternating torque in one plane (the plane of the paper), when the torques of the precessing gyroscopes add. The gearing as shown is phased to, produce torque cancellation, one gyro by the other, about a line perpendicular to the plane of the paper.

MOST POWERFUL VERSION OF MECHANICALLY DRIVEN EQUIVALENCE ENGINE

Figure (3)



THE PHILADELPHIA ELECTRIC, equivalence engine with torque drive by driven gyroscopic precession

drawn: ECD 6-77

The simplest most effective combination of this sort is a single gyro which is precessed about one axis and the alternating torque thus generated is constrained in two axis perpendicular to each other, and to the axis of constrained precession--a rectangular box at the center of a cross. For this, four alternating current generators can be excited with the out-puts in a 90 degree phase relation one pair to the other. The only losses incurred in such a machine are frictional in the motion of the precessed driven gyroscope. With the force levels obtainable--easily up to the ultimate strength of the materials of the flywheel and bearings--friction, and the heat generated there-from may be one of the principle design parameters together with the selection of the materials in the practical realization of the machine.

WHERE DOES THE ENERGY COME FROM: Two of the men who have penetrated most deeply into the understanding of "Cosmic Energy" are Mr. John Bigelow and Mr. J.G. Gallimore, both of Indianapolis, Indiana. John Bigelow calls it "Earth Energy" --The Entrancing Force With a Thousand Names. Gallimore says: "The energy itself has two polarities which are spiral twined together or may exist separately. These energies may divide into two more which are generally locked into matter". The paradigms of religion and science merge once more with the realization the polarities of the (time) energy are male and female aspects. Since the spatial reality is energized in the now (present) by the time energy flowing into it into the past, the male female aspects of the time energy flowing into them and making them alive. The rest of the world is created from these fundamental polarities.

One can think of these things not simply from the point of symmetry, since if male and female were exactly equal and opposite, there could be no issuance of generation from their mutual annihilation. This does not mean that clockwise would be equivalent to anti-clockwise, since symmetry is not shown to be a basic principle of the Universe. As well, Kozyrev of Russia has observed slight differences in the weight and inertial mass of rotating gyroscopes of identical rest mass tested in the clockwise and anti-clockwise sense of rotation with their rotational axes identically aligned.

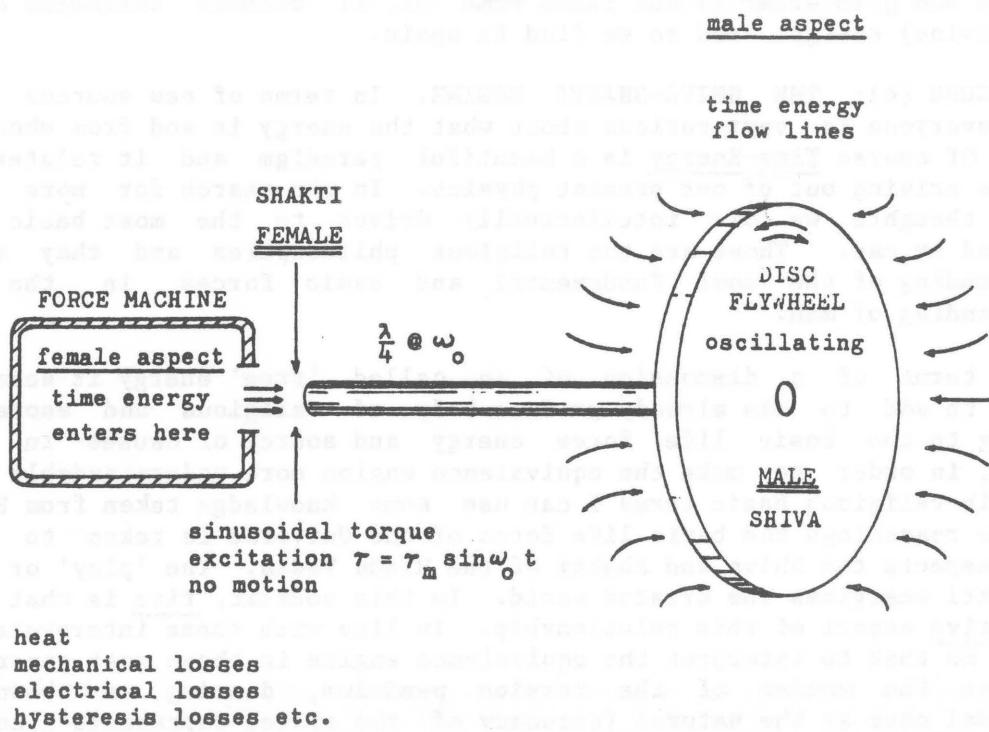
The better understanding of the whole situation is obtained (see figure 4). In figure (4) we have what I feel is the most general interpretation of the equivalence engine and its energy out-put which can be expressed in terms of the language available. We see that the operation of a torsion pendulum, an elastic torsion member, to one end of which is attached a flywheel disc. The free end of the torsion member is driven at the frequency of natural resonance of the system by a force engine, a Force Machine whose function is to provide a live constraint in the form of a sinusoidal torque variation exactly cancelling the opposing forces in the torsion member--a condition which occurs for any level of torque excitation provided at the exact resonant frequency of the system.

Such a combination, excited as shown, can be understood within a paradigm which comprehends the excitation of a system such as shown in figure (4) as the conference of a condition of polarity on the oscillating system. The motionless end is the female end and the motional flywheel end of the system is the male end. The condition of excitation of the equivalence engine by sinusoidal torque impulses at the resonant frequency of the system creates a condition where the male aspect of the time energy flow is drawn to the motional oscillating disc flywheel and the female passive aspect is drawn to the live constraint condition existing at the driven end of the system. The union of the male and female time energy aspects in the body of the machine can result in the generation of large amounts of useful electricity. If we consider the electrochemical battery in the most general terms, electricity

Figure (4)

UNDERSTANDING THE EQUIVALENCE ENGINE
 (advanced mechanical concepts)

mechanical polarization through resonance excitation creates male and female motional aspects



KARMIC END

PASSIVE

CREATED END

ACTIVE

The electrical energy which may be generated by such a combination represents the possible issuance from the merging of the male and female energies in the body of the machine.

results from the union of male-female aspects of the polarization arising from the action of an electrolyte joining the male female elements--and so on down the line. The greatest activity can be developed out of situations joining the male and female elements as archetypes. The most powerful situation which can be mechanically created is the equivalence engine driven by alternating force impulses created from the driven precession of a single rotating gyroscope which is constrained by the resonant reaction torques arising from driven torsional oscillations of the flywheel discs oscillating in the four possible directions in planes perpendicular and orthogonal to the driven axis. Figure (3), we call this the Philadelphia Electric Machine.

CONCLUSIONS: I hope it is not necessary to demonstrate the existence of time-energy by lighting a light bulb from it. As you can see, we already light our bulbs from it, and, in any case I have already shown I can convert at least a tiny fraction of it into one milliwatt of electricity. The important part is that we can only understand these machines out of paradigms more basic than common science acknowledges. The male female time energy paradigm has been with us from the Ancients. The energy has a thousand names because: (1) it is indescribable, and (2) everyone who discovers it puts his own name on it. It is entrancing, because everyone who goes after it and finds some of it becomes entranced and intoxicated with (divine) energy. And so we find it again.

FIGURE (4): THE SHIVA-SHAKTI ENGINE. In terms of new sources of energy of course everyone is very curious about what the energy is and from where does it come about. Of course Time-Energy is a beautiful paradigm and it relates right back to concepts arising out of our present physics. In the search for more general basis for our thoughts we are intellectually driven to the most basic understandings developed by man. These are the religious philosophies and they attend to the understanding of the most fundamental and basic forces in the Universe of understanding of man.

In terms of a discussion of so called 'free' energy it seems that we have nothing to add to the already profuse body of religious and esoteric dialectic relating to the basic life force energy and source of causes in the Universe. However, in order to make the equivalence engine more understandable to someone who thinks in religious basic terms I can use some knowledge taken from Hindu vendanta. In these reasonings the basic life force of the Universe is taken to have male and female aspects the Shiva and Shakti of the Hindu Vedas. The 'play' or dance of Shiva and Shakti energizes the created world. In this context, fire is what we know of the destructive aspect of this relationship. In line with these interpretations it would seem to me that to interpret the equivalence engine in these most general terms would be to see the motion of the torsion pendulum, dancing as shown with a steady sinusoidal note at the natural frequency of the system represents a condition of the creative aspect of the merging of the Shiva and Shakti elements of the life force energy; in so doing providing illumination for the world. In terms of magical interpretation of Nature, a match provides an invocation of the destructive aspect of the merging Shiva and Shakti which we know as fire. Conference of a condition of torsional vibration on the system as shown, the equivalence engine, results in the establishment of a situation of polarities of the instrument into male (Shiva) and female (Shakti) elements joined by a twisting rod in torsional oscillation at the natural frequency of combination of the system. Under these circumstances (invocation) the male and female time energy aspects are preferentially drawn to the appropriate respective ends of the system.

When electrical energy is drawn from such a device, excited as shown, the male-female time energy merging in the body of the machine shown provide the reservoir from which the useful output of the machine is drawn. If for instance the twisting torsion shaft holds peak 100 watt seconds of energy at the maximum of its cycle and the shaft is oscillating at 1000 cycles per second (both reasonable and practical figures for a useful machine) then if we withdraw 1 watt per cycle we would have an out put of 1000 electrical watts; if we withdrew the maximum possible just short of killing the resonance ($Q=2$), then we would have a maximum of 50 KW possible. These factors are theoretical and assume a generator efficiency of 100% in the conversion of mechanical to electrical power. A practical large vibratory generation system might achieve a generator efficiency of .9 which would make the out put of our small machine described above 45 kilowatts electrical.

A machine as powerful as the SHIVA-SHAKTI machine represents the same force as fire in its destructive aspect would be if it were channeled into creative force. In terms of what we get is in our genes I am tempted to make the comparison during the 'Space Age' the '60's' we were doing the "Twist" and now, the resemblance between the archetypal equivalence engine as shown and certain varieties of naturally occurring psychedelic mushrooms which have become the preoccupation of amateur mycologists the world over, is unmistakable. As the inventor of the equivalence engine I can say that reality is a curious thing. If we think about finding what is in our genes, maybe it is possible to see, get some idea of, the intensity of the symbolism which is reality.

Nothing which is far out is very useful. I speak here of the Uranium and the Plutonium merchants who chant that their merchandise will do everything for the world. The things which are commonplace or ordinary, these are the elements which will help us, the constructive elements, iron, copper, bronze. Uranium and Plutonium are poisons on every level of existence. There is nothing good about them. So if one needs an esoteric reason to avoid radioactivity here is one, the symbolism is obvious. The equivalence engine should replace all the intended activities of the bombmakers and the warmakers, two kinds of anti-social far-out activities which should be eliminated from our society.

REFERENCES:

- "EARTH ENERGY - THE ENTRANCING FORCE WITH A THOUSAND NAMES," John Bigelow, 1977, Health Research, P.O.Box 70, Mokelumne Hill, CA. 95245
- "VOLUME II-COLLECTED PROPERTIES AND WRITINGS OF J.G. GALLIMORE," Vol. 2 of THE HANDBOOK OF UNUSUAL ENERGIES, J.G. Gallimore, Health Research, Mokelumne Hill, CA.
- "UNDERSTANDING THE DROPPING OF THE SPINNING BALL EXPERIMENT," Bruce E. DePalma, Simularity Institute Report, 3 May 1977.

view from the BORDERLANDS

By Tom Brown

TESLA 88! - The 1988 International Tesla Symposium was an event with the coming together of many diverse researchers. The Board of Directors of the International Tesla Society and their volunteer workers are to be congratulated for a fine symposium.

Modern N-Machine developer Bruce DePalma was able to get together with Parahamsa Tewari and Adam Trombly who have both done considerable work to continue on with Bruce's original insights and extensions of Faraday's work. All three of these gentlemen gave talks on their work. Quite a bit of N-machine development is going on around the world. I was favorably impressed with DePalma's talk which covered a vast array of experiments on rotating objects of which the N-machine is just one series.

Researcher Guy Oblensky reproduced an experiment of major importance going beyond the Michelson-Morely experiments showing hard data on the ether drift via the use of capacitive discharges down wires stretched in differing directions. Eric Dollard reported to me that he saw a known physicist get quite disturbed at this experiment. The man was redfaced and muttering, "no, no...". Is science truly openminded?

Eric Dollard presented the engineering mathematics to continue work on Tesla's oscillating coils while shedding the misconceptions attached by modern physics which have brought real research into Tesla to a dead halt. The use of Eric's work will allow real researchers to manufacture coils with more uses than just making sparks. Eric also pointed out that the Amateur Radio operators (Hams) have a unique opportunity to continue with Tesla's work into longitudinal radio broadcasting. Perhaps you should look into getting a ham license. (Contact your local amateur radio club or the American Radio Relay League, Newington, CT 06111, for more information.)

The broadcasting of electricity, distortion free worldwide radio transmission, and single element full-spectrum incandescent lamps are just a few of the spinoffs taken from the realm of abstraction and brought to the reality of the lab bench by Eric's work, which is a direct continuation of the works of Tesla, Charles Steinmetz, Oliver Heaviside, Philo Farnsworth, and other pioneers whose work can be reproduced and used.

Many other talks were given, many good people were met and the whole symposium was a great interaction of differing minds. The talks are available on cassette and video tapes from the International Tesla Society, 330-A W. Uintah, Colorado Springs, CO 80905. The proceedings will be published by the ITS.

If this conference is taken as a "barometric reading" of the current status of the alternative energy field, then things are going strong, progress is being made, real researchers are willing to share and encourage others to duplicate and extend their work, and thankfully, those with theories with no usable research value, or political rather than scientific motivation, are pulling in their tales, changing their stories and thinning their ranks.

ELECTRICITY - Around the 1700s humanity's conception of reality began to shift from conceiving of our world as cosmic in origin to the point centered materialistic conceptions of modern physics. Along this path of perceptions we may comprehend the metamorphosis of humanity's conception of electricity.

Electricity may be understood as the externalization of the human volitional force. A concept in the mind, gained through observation and experimentation leads to the manifestation of equipment which will aid in the volition of humanity. Electricity has

the ability to lead humanity up or to drag them down. We can see what is happening in the world today.

The work of Nikola Tesla was a major turning point in this externalization of the volitional force. His inventions have the ability to set humanity free from bondage of controlling overlords.

If Tesla's Wardenclyffe Tower, for wireless broadcasts of energy and information, would have been completed we would live in a different world today. The ugly miles of power lines criss-crossing the planet would not be there, imposing odd fields of energy across the natural flows. The computer society of today would not exist in its present form because computers are alien to high frequency electricity as used by Tesla. The control mechanisms brought to us by metered energy, computerized recordings of fundamental economic and other activities, etc. would not exist had Tesla's inner sight fully externalized into material reality. The incompleteness of the Wardenclyffe Tower signifies a definite downturn in the direction of the human race. Tesla himself said that his work was not stopped by small men, but by the very laws of nature herself. Humanity was not yet ready, according to Tesla. We should be concerned with the proper methods of alleviating this status.

The advent of the nuclear sciences has further pulled humanity down from the path of healthy, qualitative living. This situation has degenerated so that now the food is being doused with deadly radioactivity. (A handy way to dispose of deadly waste -- feed it to the people!) Nuclear death is pervading our very foodstuffs, which rather than imparting vitality to our systems they continue to degrade the face of humanity as a whole. Billions of dollars are available for nuclear research, sometimes pennies can be found through persistence for the continuation of Tesla's work and other beneficial technologies. Is this a conscious conspiracy spanning centuries or a force (Ahrimanic?) that humanity has succumbed to through degeneration of the moral impulses that first brought humanity out of the animal consciousness?

HOMEOPATHY IN THE "NEWS" - The British "scientific" journal NATURE has created quite a stir this summer by printing an article (Human Basophil Degranulation Triggered by Very Dilute Antiserum Against IgE by Dr. Jacques Benveniste, University of Paris-Sud, & other scientists) apparently giving credence to homeopathy. BSRF has a clipping in the files from the San Francisco Chronicle, June 30, 1988 titled "SCIENCE JOURNAL PRINTS REPORT IT DOESN'T BELIEVE." Since when does science base itself on belief? The "news" story gives us a rare insight into the closed mind of science, to quote, "NATURE, a model of scientific probity since it was founded in London in 1869, was so uneasy about publishing the report that it felt compelled to add an editorial 'reservation'."

Many papers and magazines carried similar articles commenting on water's "bizarre memory", of course ignoring that homeopathy also works with potentizations of substances in solid material. Even though NATURE presented the article because it was scientifically recorded at several worldwide locations the idea of a force not centered in a point has the editors acting in a rather bizarre manner. Why did they publish it if they had reservations? Did they plan on attacking it as they proceeded to do?

Besides running the editorial questioning the article they then sent stage performer and professional debunker James "the amazing" Randi to (what else?) debunk the whole thing. Even though the experiment had been performed at many labs around the world on many occasions the NATURE team really put the pressure on Dr. Benveniste, rather than allowing an orderly progression of events. Randi busied himself with entertaining everyone with his tricks and lent nothing constructive to the actual check on the experiment. The experiment apparently failed on the final double-blind, even though it had worked many times previously in Paris, Toronto, Jerusalem and Milan.

Newsweek responded with a brief "WATER'S DISAPPEARING MEMORY" while other media sources carried similar reports, as if to lay homeopathy to rest forever.

Borderland members should try the experiment in homeopathy given by Trevor Constable in his article FINE FORCES AND THE PLANT published in the March-April 1987 JBR and experience for themselves the reality of "dilute" substances.

PUFF THE SILLY GOOSE - At our property near Garberville, California we have a variety of animals including six geese. It is a constant battle with the raccoons, who have eaten at least 12 ducks and geese so far, to keep the birds alive. One evening in July, just after dark, Alison brought me one of our geese, "Puff", who had been killed (or so we thought) by a raccoon. Puff's neck was twisted and the top of his head was ripped open, a ghastly wound. While we were contemplating the inert carcass Puff began to twitch and move, eventually righting himself, though with a blank look. All we could think of doing was to put the bird out of his misery, it was a mess. Somehow we decided to try and treat the bird with homeopathy to see how it would react.

We brought Puff into our living room and cleaned the wound. There was not much life left in the bird but an attempt at life provides a more qualitative inner feeling than an passive acquiescence of death. Alison, who has just taken a course in homeopathy at the local Heartwood Institute, first gave Puff Arnica tablets for shock (down the throat) and then put Calendula Tincture on the wound for promotion of tissue growth and put dissolved Ledum Palustre (remedy for punctures & animal bites) down his throat. We also sprinkled Myrrh and Goldenseal on the wound to dry it up and stop infection. Within 4 days of beginning treatment Puff was back with his buddies, honking and hissing at the world in general. Well over a month and a half later now and he is a healthy bird, with a nice big scar on his head. Perhaps geese have amazing recuperative powers (like professional wrestlers) and can come back to life without medication (if that is how you wish to conceive "diluted" substances), but for such a horrible wound to be treated with homeopathic methods and respond so quickly makes me wonder if Puff the Silly Goose knows more about the reality of homeopathy than the editors of NATURE?!?!? Pragmatic reality goes far beyond a scientist's "belief".

Homeopathy is a prime area of borderland research. This is a true phenomena dealing with the border between the seen and unseen. During the potentization of a substance (a rhythmic "dilution") the substance is brought to its etherial-peripheral state rather than the central form representative of its pure elemental state. In an upcoming JBR we will carry further information on how to create your own potentized substances. Experiencing homeopathy is a true lesson in the etheric forces.

The works of George Adams (such as PHYSICAL AND ETHEREAL SPACES, Rudolf Steiner Press, London) in describing the non-Euclidian counterspace of the etheric will give a clear understanding of the activities taking place during the potentization of substances into homeopathic preparations. I highly recommend his taped lecture POTENTIZATION & PERIPHERY FORCES available in the Spiritual Sciences Lectures from BSRF.

Eugene and Lilly Kolisko, two brilliant scientists from the Anthroposophical movement, did many experiments with homeopathy showing that the intensity of the effect has a relationship to the number of times the substance has been succussed (rhythmically pounded). More on theirs and related works will be explored in future issues of the Journal, with indications for experiments. The Koliskos also did a series of experiments with the crystallization of gold chloride before, during and after a full solar eclipse in 1927. It is interesting to note that the gold chloride would not form the crystals during the eclipse. They did many years of experiments in this vein with crystallization of metallic salts in relationship to planetary alignments. Their work gives us experimental considerations that there is a direct connection between earthly substances and cosmic bodies. Further experiments will be presented in the future to carry on with this line of spiritual-scientific thought.

We openly invite papers and comments on homeopathy and related subjects from our members. This is a project everyone can take an active part in.

NEW VIEWPOINTS - The basic point of view of humanity's place in this universe has changed quite a bit in the last thousand years or so. We are told that the ignorant once thought that the earth was the center of the universe and that the sun, moon and stars were structured so as to provide a direct connection to the spiritual world. But now we supposedly have advanced so that we now KNOW that the earth orbits the sun, making the sun the center of our little solar system, which we are told then orbits the

center of the galaxy.

I prefer the supposedly ignorant viewpoint, though I'm quite aware of the learned view. If I walk out the door during the day I see the sun moving overhead. At night I see the stars and planets overhead. The moon appears during the day and night. It LOOKS to me like everything is revolving around the earth. Of course the scientists are quite adept at explaining away what one perceives so some will think me mad for saying so, but from the spiritual standpoint earth is the center of the universe at this stage of our human development. The work of the Koliskos and Rudolf Hauschka (THE NATURE OF SUBSTANCE) among others confirm our connections with the cosmic motions of stars and planets which we can see above us.

Perhaps material space is different, but will we truly KNOW until we physically experience it?? Can we rely strictly on telescopes and machines flung above the atmosphere?? Their evidence must be considered, it is real, but we must not ignore what we ourselves are able to directly experience.

The space perceived by our eyes and our waking consciousness is the one most denied by modern science. Rather science depends on the space related to the skeleton, the most dead and dense portion of the body. They have opted for the material space and neglected the spiritual, the most obvious to our sense of sight.

HOLLOW SUN - In his book THE SUN - Ancient Mysteries and A New Physics (Anthroposophic Press, NY) author Georg Blattmann explores the counterspatial structure of the sun. Using a clear train of thought Mr. Blattmann, a priest and physicist, leads us to a view completely different from what we have known before, combining spiritual reality with scientific fact. He indicates that we live on the inside of the sun, the sun being a reverse type of space than that of our material comprehension. Spiritual space is the inverse of physical space, and this must be considered in a proper understanding of reality. The planets are existing and moving within the solar body. Outer space is that which is beyond the skin of the sun, that which we can never reach through physical means and/or phenomenological observation with a spiritually based consciousness.

HOLLOW EARTH - In past issues of this Journal I have presented various concepts on the hollow earth. One of the more curious instances of modern consciousness attempting to comprehend the hollow earth concept were the experiments by German scientists during WWII to photograph the British fleet across the North Sea by pointing infrared cameras up into the sky at a 45% angle (reported on in Nov-Dec 87 JBR). They felt that we lived on the inside of the hollow earth. They were not alone in believing this.

An gentleman by name of Cyrus Teed, also known as KORESH, led a group of believers with similar ideas. He first presented his ideas in 1870. In his treatise THE CELLULAR COSMOGONY Koresh gives his belief structure and physical experimentation to prove the reality of his view point. Koresh, whilst being a religious fanatic of sorts (anyone who didn't believe we are on the inside of the earth was considered a manifestation of the Anti-Christ), was also an astute observer of physical phenomena. He did massive surveying experiments along the shorelines of various bodies of water and his experiments indicate that the shores all curved up over many miles of distance. These were real experiments, with all information given, all reproducible (with major amounts of work, of course), and with answers to the critics and detractors of his theory. If true, these experiments indicate that we actually do live on the inside.

Koresh also gives quite a bit of information on optical theories and perceptions at a distance. We can easily toss this material out as being the ravings of a madman, but this lessens our ability for scientific thought because we must consider his physical experiments with their documented results with the healthy skepticism which science should maintain. THE CELLULAR COSMOGONY is under consideration for reprinting by BSRF for researchers to check and verify the information, it is a fascinating book. Feel free to comment on this train of thought. A different, and well worked out view will provide new perspectives on what space really is like.

Are we merely a chance happening of living forms on the surface of a sphere of stone, filled with an as yet to be seen molten metal, circling a nuclear reaction we call the sun, in a universe that goes on forever with no difference in quality of the space? Or are we on a level of existence which draws its sustenance and form from a direct connection to the cosmic structures and motions we see surrounding us? Does space have different qualities around different types of objects such as the sun and the earth? Can the conceptual spaces of modern gravity-bound humanity, those perceived and presented by Blattmann (and variations thereof presented by many Anthroposophical researchers), that perceived and presented by Koresh, all fit into the same universe?

SPACE - What then is space? Can we take the limited physical measurements of which we are capable with instrumentation and extend them onward to infinity? Or does space function as it appears, as the science of perspective developed by artists during the middle ages has shown giving growth to projective geometry?

I have found in my researches (as reported in Nov-Dec 1987 JBR) into information available from NASA that it is very probable that the stars cannot be seen by a human eye looking through plain glass in outer space. The early astronauts could not see the stars in space. This was a big puzzle and various optical devices (whose origin was not disclosed to me) were experimented with, and then only a few of the higher magnitude light sources could be seen. After several months of talking to various people at NASA I finally spoke with an astronaut now attached to the Naval Research Labs. He laughed at me and said that the stars could be seen in outer space, they were even brighter than on earth! So I called back NASA and to paraphrase what they said, "Well sir, the astronaut is a trained observer, and he was up there while I was not, but the information that I have available is that the stars cannot be seen in outer space."

It is my supposition that some type of optical surface was devised to allow the astronauts to see the stars in space and was incorporated into the glass of the suit without much publicity. In speaking with many people around the country on this subject I've received a wide variety of reactions, some of the more outstanding examples involved the person acting as if their very life was being threatened by this information. There may have been a decision not to publicize this information because of potential public reaction to a mental foundation of our present consciousness. Mere speculation?? In a notebook I have the names, times, phone numbers, etc. of the above. All my talks took place with people who worked with NASA, and all standing by their story. Why would I get different stories?

To those who wish to rebut this view, please send in pictures of the stars taken from above the atmosphere. I'd love to see them. You say "well what about the space telescopes about to be launched?" Perhaps they are to look at YOU!! No white light photos of the sun from space are available either! I've looked extensively.

There are many ramifications of this information, too numerous to mention here, but suffice to say that space is very probably quite different than we think, or perhaps are able to think. Conceptualists such as Blattmann and Koresh have perhaps touched upon aspects of reality which are easily dismissed because they would be so disturbing if true. Wilhelm Reich indicated that starlight was a localized atmospheric phenomenon, and the Koliskos show that the motions and alignments of these lights have incredible impact on the structure of matter. There is much room for research here.

Material space and spiritual space interpenetrate. Space may go through stages of metamorphosis just like plant life and if so it would no doubt have higher order metamorphosis as take place inwardly on the human spiritual planes, a reverse polarity to the outward flowering of plants.

SPIRITUAL SCIENCE - Modern physics encompasses the archetypes of our being as presented and accepted by orthodoxy. But upon closer examination one will find these to be inert, distorted mirror image archetypes found by peering into the cloud chambers and particle accelerators, and abstractly extending these destructive tendencies and

placing them upon the living universe. True spiritual awareness encompasses the archetypes of life, and is based on readily accessible structures derived from one's experiential interweaving with the qualitative expressions of the creative intelligence. The archetypes of the subatomic mirror realm are all based on the motions of destruction and death and have no relationship to the science of life.

To quote from THE SUN: Ancient Mysteries and a New Physics by Georg Blattmann, (Anthroposophic Press): "The absurdity [of modern scientific views] has arisen because the top has been laid at the bottom. Instead of starting from the immediate observations of a healthy understanding, upon which the more advanced and complicated structure could be built, we have as a starting point abstract statements derived from scientific apparatus and involved calculations, and these are accepted to the detriment of our own perceptions....."

There is an entire body of knowledge dealing with what science really is, and not just what it appears from the particle oriented consciousness of modern mankind. Many of the concepts dealt with by modern physics can be seen as errors in judgement and perception by a reading of Ernst Lehrs' book MAN OR MATTER. I thank the writings of Lehrs for completing my withdrawal from the concepts of particle oriented, death patterned modern physics, and in their place inserting a living, comprehensive view of the universe that has instilled incredible waves of cognition, leading to a solid basis for understanding the workings of the spiritual forces and their evident expression in life. I have only gone over a tiny portion of the available material.

Rather than contorting our brains with the concepts of "curved space-time" and other theoretical indulgences, one should look to the spiritually real, understandable and perceptible concepts dealt with in ethereal physics and projective geometry. The theory of relativity falls to pieces once one begins following and understanding the experimental orientation in MAN OR MATTER and other scientific materials from the Anthroposophical movement.

The speed of light can be seen as merely the speed of the transverse wavefront of light through our atmospheric and solar-planetary medium. To assume this is the actual speed of light and the limit of the universe begs one to believe in mere abstract thinking unrelated to the qualitative perceptions available to a true natural scientist. So it is also for black holes, white holes and the like as well as particles in general. They are in a general sense mere abstractions, far removed from any perceptive quality or any analogy to natural phenomena, though atomic theory is certainly in contact with reality as nuclear power and atomic bombs will readily testify. These forces could be used for the benefit of humanity, our worldwide communication systems, based on electrons, could be spreading an incredible wealth of helpful information, but somehow the reverse is happening. The channels are clogged.

In defense of particles, which Bruce DePalma has pointed out are created by the experiment, we look to the work of Philo Taylor Farnsworth II, the 'master of the electron' according to Eric Dollard. The electron certainly is real enough to make television work, but it is manufactured by the apparatus. The electron multiplier tube creates electrons en masse, so much so that we have indications of "free energy." Looking at Farnsworth's inventions as externalizations of his internal thought processes we again have a clear example of the outwardly existing reality first conceived in the soul of the inventor. As with Tesla's inventions the work of Farnsworth has the ability to lead humanity in an upward progression or to drag us downward away from our inherent abilities. Which way are we going? Check your TV.

Our researches here at Borderland are beginning to show that the so-called "electro-magnetic spectrum" does not exist in the linear form propounded by modern science. There are demonstrably two spectrums of color, derived from the interaction of light and dark, rather than being components of light. There are also electro-magnetic and dielectric phenomenon in electricity, both with the ability to operate at the same "frequency", but one side obviously not fitting into the linear "spectrum".

Science attributes just a tiny portion of the linear "electromagnetic" spectrum to visible light, showing how it has truly denied the importance of the sense of sight.

Rather we should consider that light surrounds us, it regulates our lives, it controls our health and moods, it provides us with physical and spiritual food. It does not fit into any tiny slit in my mind.

It is within the scope of the work of BSRF to attempt to change the orientation of our scientific seekers of the day to that of phenomenological cognition. The subsequent outpourings of todays scientists will interpenetrate the very foundations of our societal components. Do we want the future to be based on the archetypes of nuclear energy and electromagnetism??? Rather than the particle accelerator one should study the metamorphosis of plants as propounded by Goethe. Therein lies the secrets of natural energy if we are aware enough to understand that our purpose in our material body is to create a beneficial structuring of our etheric sheaths in order to progress through space and time in harmony with our cosmic purpose.

Only an aware few want to climb out of their mental boxes and find out what is really happening. It is less than 12 years to the millennium. Will we continue to entertain eccentric opinions, or will we get down to the real work?

COSMIC WEATHER REPORT - Solar activity for Cycle 22 has increased steadily, with no outstanding events. Radio station WWV (5, 10 & 15 megacycles) usually provides us with daily solar indices. The Solar/Geoalert portion of the broadcast has been out of order so we have been relying on mailed weekly reports, and this adds quite a bit of difficulty in keeping track of day to day solar activities & weather. In conjunction with travel to the Tesla convention and other business this has been a period of intermittent watch. This is truly a job in itself, and we encourage cooperation of the BSRF Associates.

Cycle 22 has had an intense overall rise of activity. I have heard that the more intense a cycle is the faster it occurs. This appears to be happening. Preliminary predictions indicated that Cycle 22 would peak out around May, 1991. Current predictions place it around Dec. 1989.

We have begun printing out charts of the positions of planets during major solar flares. This is a major project in itself and it will take time to integrate the concepts into the Journal. We hope to print the charts of flares and discuss the planetary positions in upcoming Journals.

In the last Cosmic Weather Report we reported on our observations that the solar flux indicators were following the lunar cycles. This appears to have been a temporary phenomenon due most likely to the fact that the sun's rotation is approximately 27-33 days while the moon's is 28. The moon is a major controlling factor in the weather so with the two cycles in alignment it is easy to understand why we observed the weather following the two cycles while in alignment.

THE WORK - Most Borderland readers are lay people. I myself am a layperson with an active interest in solving the riddles of manifestation, using analogical reasoning to extract the primal archetypes of being from experiential awareness of reality.

In directing Borderland Sciences my intention is not to get everyone believing what is printed in the Journal, but to get aware people oriented toward patterns that will provide stimulating new discoveries which will give us all a better understanding of the Borderland which separates the seen from the unseen world, and also a clear view to the "other side" for proper perspective on our activities here.

There is always enough research work for a staff of 10, not counting the seemingly endless office-oriented paper shuffling. If BSRF Members reading this are interested in writing synopsis of various researchers works and reviewing some of the books we sell and get for review then write a letter indicating what you would like to do and what materials you are interested in writing up. If you are looking for a project one can certainly be suggested. The whole intention of this is to get more useful information in print for the membership. The work will all progress faster as a group effort. Don't shy away because you don't understand a lot of what is here, for only by digging in and checking things out will you progress.

B.S.R.F. BULLETIN BOARD

The B.S.R.F. Bulletin Board is a section for Letters, Reviews, Events, Contacts & other useful information for Borderland Members to aid in their researches. We encourage BSRF Members to submit contributions & information to B.S.R.F. Bulletin Board, PO Box 429, Garberville CA 95440. Letters should be addressed to LETTERS TO THE EDITOR, c/o the above address.

LETTERS TO THE EDITOR

AIDS COMMENTS

"I have to congratulate you on the best article I have so far read on the subject of AIDS -- "Reflections On The Plague Years" by Michael Urban. (May-June 88 JBR)

"As a follow-up, I have also read the 21 page paper published in Cancer Research by Peter Duesberg, as well as "AIDS Heresy" by Jeff Miller in the current issue of 'DISCOVER'.

"All very interesting but leaving a lot of irritating question marks. Urban seems to have a wide knowledge of Borderland science. At least he is familiar with MWO's and radionics, etc. which would indicate that he is a searcher with an open mind.

"I repeat what I have told you before that the fundamental cause of AIDS lies in the human mind. Why do researchers ignore the obvious fact that, for the first time in medical science, here we have a disease that is socially selective? And, they never seem to ask themselves what male homosexuals, Haitians and IV drug users have in common? And why AIDS has never hit the general population - as polio did way back in '53.

"I think research has to pause for a moment and resolve these questions BEFORE they start messing around with test-tubes and Petri dishes. I think Duesberg is right. The HIV virus is a Marker same as the EBVirus and Progenitor Cryptocides in cancer and the Limax amoeba in arthritis. So, once again we come back to the phenomenon of MULTIPLE PERSONALITIES and their physiological effect on the body and immune system -- which no one seems to know anything about or care.

"Keep up the good work!"

Sincerely, Robert (Roy) A. McLellan

Thanks Roy, for your good words and pertinent comments. Borderland members who have been with us since the days of Riley Crabb will remember the article by Mr. McLellan in the Nov-Dec 1985 JBR, titled SOLVING THE CANCER ENIGMA, WITH HUNA concerning the phenomena of multiple personalities and disease. An updated version of this article has been presented to Borderland for publication and will appear in an upcoming Journal. Stay tuned.

RECEIVED - Books, magazines, pamphlets received for review. Lack of time and staff generally doesn't allow for reviewing all the materials that come in. We will list the material as it comes in, and Borderland Members are free to check these materials out for themselves. Drop a line if you are capable of actually sending a review in exchange for a book. (I've already sent out a few books for review with no return!)

* ONWARD AND UPWARD - OURSELVES by L.D. Beckwith from Liaison Productions, 3637 Snell Ave. #57, San Jose, CA 95136. "The objective of this book is to clearly and simply state the findings as were inspirationally revealed to the author." An interesting inspirational book with an excellent chart of foods (from 10-1) in order of benefit to the body. Curious!

* ELIXIR OF THE AGELESS - You Are What You Drink, second revised edition, by Patrick and Gael Flanagan, Vortex Press, 22 S. San Francisco St., Suite 219, Flagstaff, AZ 86001. Water is rapidly becoming the most valuable liquid on earth. Good information on water is also valuable and Pat and Gael have put together a thorough and interesting research report on the benefits of colloids (suspended substances) in water. Nice update from the first edition. \$9.95 + \$1 P&H.

* THE CRYSTAL VISIONARY, Volume One, compiled and edited by Michael Ney, Aquarian Media, PO Box 566, Milsons Point, 2061 NSW, AUSTRALIA. "Explore the world of crystals. Over 200 pages on Crystals form mediation, healing and visionary experiences. Articles on: The Crystal Skull, Crystal History, Energy, Magic, Gem Elixirs, Earth's Crystal Grid, Gems News...." \$US 15.50 for air mail delivery.

* CYBERPHYSIOLOGY - The Science of Self-Regulation, A publication of THE ARCHAEOUS PROJECT, 2402 University Ave., St. Paul, MN 55114. A pamphlet covering the concepts of Hypnosis, Biofeedback, Yoga, Meditation, Psychoneuroimmunology. If you are looking for research data on how the mind can control the body this looks like a valuable piece of information and written for the intelligentsia.

* JESUS NEVER WAS A CHRISTIAN by Jonathan Edward Alder from Jonathan Edward Publications, PO Box 7111, Orange CA 92613-7111. This book is based on the premise that the original teachings of Jesus dealt with internal experience and awakening as opposed to the externalized heaven promised by modern organized religions. Based on over 10 years of investigation into over 2000 books. \$10.95 + \$1.25 P&H (+Cal. tax).

CONTACTS - When requesting catalogs, information, etc., please be kind courteous and send \$1 or two, or at least a S.A.S.E. This is also your forum to contact researchers of similar mind. There is no charge to members for being listed.

* ADVANCED SCIENCES RESEARCH & DEVELOPMENT CORPORATION, P.O. Box 109, Lakemont, GA 30552. This group headed by Sarah Hieronymus has just sent us their latest catalog of 'ELOPTIC ENERGY' Detection Equipment, all developed through the many decades of work by the late T. Galen Hieronymus. Advance Sciences also publishes THE ADVANCED SCIENCES ADVISORY (bi-monthly, \$20/year); and THE COSMICULTURE BULLETIN (bi-monthly, \$20/year).

* ST. GEORGE BOOK SERVICE, PO Box 225, Spring Valley, NY 10977. Telephone # (914) 623-7852. Publishers and distributors for spiritual science books and writings related to the work of Rudolf Steiner. They have quite a collection of quality material available. People interested in the hard to find writings of Eugene and Lilly Kolisko should contact these people and see what is currently available.

* ORIENTAL HEALING ARTS INSTITUTE, 1945 Palo Verde Ave., Suite 208, Long Beach, CA 90815. A non-profit membership organization that translates and publishes information on the oriental healing arts in books and a newsletter. Excellent material on a subject which needs more exposure!

* KLARK KENT - SUPER SCIENCE, PO Box 392, Dayton, OH 45409, Phone # (513) 298-7116. Borderlanders are familiar with Klark's writings on MWOs, UFOs and Orgone Energy. He now supplies a Magnetic Field Distortion Detector for \$195. "This scientific instrument is for amateur and professional Ufologists to use at home or in actual field cases! This sensitive, powerful device measures the flux of changing magnetic energy pulsing in the air and alerts to magnetic disturbances that UFOs can cause!"

New Publications Now Available From
BORDERLAND SCIENCES RESEARCH FOUNDATION, P.O. Box 429, Garberville CA 95440

RAYS OF POSITIVE ELECTRICITY and Their Application to Chemical Analysis by Sir J.J. Thomson, 1913. Contents: Rays of Positive Electricity; Double Cathodes; Rectilinear Propagation of Positive Rays; Electrostatic Deflection of the Particle; Very Low Pressure Effects; Negatively Charged Particles; Atoms Carrying Two or More Positive Charges; Retrograde & Anode Rays; Doppler Effect; Spectra Produced by Bombardment with Positive Rays; Disintegration of Metals Under the Action of Positive Rays; The Use of the Positive Rays for Chemical Analysis; Evolution of Helium & Neon. A classic book by the discoverer of the electron. 132 pp, staples. \$14.95

MY SEARCH FOR RADIONIC TRUTHS by R. Murray Denning. In this enlightening treatise on the subtle energy healing art of Radionics author R. Murray Denning describes his fascinating 25 year search into the works of eminent Radionic scholars and pioneers of the past, and presents the 'lost' knowledge he has preserved. Contains many historic photos and descriptions of rare and unique Radionic equipment and also encompasses many related fields such as dowsing, color therapy, numerology, yoga and alchemy. 115 pages, b/w photos & ills., perfectbound. ISBN 0-945685-01-7 \$9.95

LITHIUM and Lithium Crystals by Haroldine is the record of the Lithium Research Project of Lithium Laboratories Limited. LITHIUM will provide you with the widest range of available information in print on lithium, the first solid element. Contents include: What is Lithium?; The Ultimate Compound; The Ugly Duckling or Cinderella Chemical - Lithium Salts; Various Uses of Lithium; Crystal Structure - The Key to an Instrument That Heals; Minerals (extensive report on lithium crystal uses and sources, including radionic rates); Toward Human Perfection; Water = Liquid Crystals; Systemic Stabilization; with an addendum and bibliography.
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